MAC-10102/29 21402sh

- 1. An improved piezoelectric (PZT) force motor, comprising:
- a housing having opposing ends;
- a PZT element supported relative the housing operative to expand and contract the
- 4 ends of the housing through the application of an electrical signal; and
 - a plurality of components exhibiting both positive and negative coefficients of
- thermal expansion which cooperate to cancel one another so as to reduce the overall temperature expansion coefficient of the motor.
- 2. The improved piezoelectric force motor of claim 1, wherein the PZT
- 2 element is a stacked structure.
- 3. The improved piezoelectric force motor of claim 1, wherein the
- 2 components include:
 - a first member which expands in one direction; and
- 4 a second member which expands in the opposite direction.
- 4. The improved piezoelectric force motor of claim 1, wherein the second 2 member is a cup.